IN THE UNITED STATES DISTRICT COURT
DISTRICT OF MASSACHUSETTS

KONINKLIJKE PHILIPS N.V. and PHILIPS LIGHTING NORTH AMERICA CORPORATION, Plaintiffs, v. WANGS ALLIANCE CORPORATION d/b/a WAC LIGHTING CO., Defendant.	CIVIL ACTION NO. 14-cv-12298-DJC

PHILIPS LIGHTING'S SUPPLEMENTAL CLAIM CONSTRUCTION BRIEF

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In accordance with the Court's Order (D.I. 177), Plaintiffs Koninklijke Philips N.V. and Philips Lighting North America Corporation (collectively, "Philips Lighting") submit this supplemental brief on claim construction. Philips Lighting respectfully requests that the Court adopt Philips Lighting's proposed constructions, as set forth in Attachment A of D.I. 174.

I. U.S. Patent No. 6,147,458

1. "input filter means"/"input filter" – Philips Lighting's proposed construction should be adopted. **D.I. 35** at 5-7, 12-13; **D.I. 48** at 2-4, 7-8; **D.I. 60, App'x B** at 5; **D.I. 101, Ex. A** at 18-38, 98-107, **Ex. B** at 57-63, 103-31, 152-56; **D.I. 111** at 1-4; **D.I. 117, Ex. 2** at 12-19; **D.I. 130** at 1-3. These citations include arguments on this term for the '988 patent, which uses the same term and has a similar disclosure. Because the briefing addresses the '988 patent first, Philips Lighting abbreviated the discussion of this term for the '458 patent to avoid repetition. In the IPR, WAC argued that this term is in means-plus-function format and is therefore indefinite, or alternatively, if not a means-plus-function term, the term should be construed similarly to Philips Lighting's proposal. **D.I. 85, Ex. 2** at 4-6. Although the Board decided that no construction was necessary in the '458 IPR (**D.I. 118, Ex. 2** at 7), the Board in the '988 IPR agreed with Philips Lighting that the term is *not* a means-plus-function term, and adopted a construction similar to Philips Lighting's proposal (**D.I. 118, Ex. 1** at 6-8; **D.I. 174, Ex. 1** at 6-12). As part of that construction, the Board confirmed that the transmission or rejection of a signal is a function of the frequency of the signal. **D.I. 174, Ex. 1** at 9-12. Philips Lighting agrees and considers that understanding inherent in its proposed construction.

2. "means CM . . ." – Philips Lighting's proposed construction should be adopted. **D.I. 35** at 14-17; **D.I. 48** at 8-10; **D.I. 60, App'x B** at 5-6; **D.I. 101, Ex. A** at 120-38, **Ex. B** at 50-51, 54, 57-60, 62-63, 81-85, 162-67; **D.I. 130** at 1-3. WAC originally argued that this term is a means-plus-function term, but in the IPR, WAC conceded that "the terms do include

sufficient structure to overcome the presumption that the terms are means-plus-function terms," and WAC adopted Philips Lighting's proposed construction. **D.I. 85, Ex. 2** at 9-10. WAC tried to distinguish its district court position by arguing that a different standard applies in the IPR. *See* ***id.*** While the broadest reasonable interpretation standard applies to claim construction in an IPR, the Board applies the *same* statutory standard—35 U.S.C. § 112(f) (formerly ¶ 6)—as the district court when deciding whether a term is in the means-plus-function format and construing a means-plus-function term (*see* **Hearing (6/2/15) Tr.** at 6:1-23; **D.I. 101, Ex. B** at 92; **D.I. 104** at 15). In the IPR, the Board decided that this term required no construction. **D.I. 118, Ex. 2** at 7.

3. "removing a leakage current" – No construction is necessary, or Philips Lighting's construction should be adopted. **D.I. 35** at 13-14; **D.I. 48** at 10; **D.I. 60, App'x B** at 7; **D.I. 101, Ex. A** at 108-19, **Ex. B** at 157-61. The claim recites "*removing* a leakage current," but WAC rewrites "removing" to be "*providing a path for* the leakage current *which passes through the control unit when the control unit is at a low voltage level*." **D.I. 175, App'x B** at 5. In a "compromise" construction provided at the claim construction hearing, WAC agreed with Philips Lighting's interpretation of "removing" as "drawing." **D.I. 89, Ex. A** at 77. WAC urges that the term "leakage current" means "unnecessary dissipation of power" (**D.I. 175, App'x B** at 6), which WAC did not argue until the hearing, after the parties had completed briefing (**D.I. 60, App'x B** at 7). Describing a preferred embodiment, the '458 patent states that the deactivating means has the advantage of counteracting unnecessary power dissipation. **D.I. 1, Ex. 2** at 1:55-59, 2:19-25. There is no reason to pull a stated advantage of the deactivating means into the meaning of leakage current, and indeed, it would be improper to do so. **D.I. 101, Ex. B** at 158. WAC's own expert does not support WAC's construction, instead offering a different

one. **D.I. 101, Ex. A** at 114, 117, **Ex. B** at 159. In the IPR, the Board decided that no construction was necessary. **D.I. 118, Ex. 2** at 7.

4. "self-regulating deactivating means . . ." – Philips Lighting's proposed construction should be adopted. **D.I. 35** at 17-19; **D.I. 48** at 10-11; **D.I. 60, App'x B** at 7-8; **D.I. 101, Ex. A** at 139-55, **Ex. B** at 64-69, 72, 81-83. The parties agree that the term is a means-plus-function term and that the function is the recited function, but dispute the corresponding structure. **D.I. 175, App'x B** at 6-7. In this case, WAC has proposed four different constructions for the corresponding structure (**D.I. 101, Ex. A** at 152), and WAC proposed a fifth construction in the IPR (**D.I. 85, Ex. 2** at 8-9), even though the Board applies the same statutory standard under § 112(f) (formerly ¶ 6) when construing means-plus-function terms (*see* ***supra*** **Part I.2**). WAC equated its construction in the IPR ("a transistor and Zener Diode") to Philips Lighting's proposed construction ("transistor T_M and zener diode Z60), telling the Board that "Patent Owner and its expert have agreed with this construction." **D.I. 85, Ex. 2** at 9.

II. U.S. Patent No. 6,561,690

5. "optical means . . ." – Philips Lighting's proposed construction should be adopted. **D.I. 35** at 23-25; **D.I. 48** at 12-13; **D.I. 60, App'x B** at 10; **D.I. 86**, ¶¶ 2-13; **D.I. 101, Ex. A** at 184-97, **Ex. B** at 70, 74-77, 174-82; **D.I. 117, Ex. 4** at 11-15; **D.I. 175, Ex. 10** at 6-15. The parties agree that the term is a means-plus-function term and that the function is the recited function, but dispute the corresponding structure. **D.I. 175**, **App'x B** at 13. In this case, WAC argued that the corresponding structure is a collimator with numerous features, including a symmetrical lateral surface. **D.I. 60, App'x B** at 10; **D.I**. **89, Ex. A** at 10, 96-97. WAC went to one extreme in its earlier constructions by including every aspect of the disclosed collimators, including aspects that did not perform, were not described as performing, and were not necessary to perform the recited function. In the IPR and now for the first time in this case, WAC goes to

the opposite extreme by identifying only a "collimator" as corresponding structure (**D.I. 175**, **App'x B** at 13), even though every collimator in the '690 patent has a symmetrical lateral surface and the '690 patent describes the symmetrical lateral surface as performing the recited function. **D.I. 1, Ex. D** at 3:24-40 ("The collimator 4 has a symmetrical lateral surface 5 . . . . The lateral surface 5 of the collimator 4 causes the light emitted by the LED 2 to be concentrated into a beam. . . . This light beam leaves the collimator 4 by the front surface 6 . . . .").

As Philips Lighting and its expert Dr. Teich have explained, the symmetrical lateral surface of a collimator is the *necessary* structure that *the '690 patent describes* as performing the function of "guiding the light emitted by the LED towards outside of the housing." **D.I. 35** at 23-24; **D.I. 38**, ¶¶ 25, 27-29; **D.I. 175, Ex. 10** at 8-15. A means-plus-function term must be limited to the structure that *the specification teaches* as performing the claimed function (and that structure's equivalents). *Welker Bearing Co. v. PHD, Inc*., 550 F.3d 1090, 1098 (Fed. Cir. 2008) (limiting the corresponding structure to what the specification teaches as performing the function where "[n]othing in the specification suggests any other structure"). Even if WAC were correct and any collimator *could* perform the recited function, it would be a legal error to expand the scope of this term beyond the structure that *the '690 specification describes* as performing the function—the '690 patent never suggests that *any* collimator performs the function. *Mettler-Toledo, Inc. v. B-Tek Scales, LLC*, 671 F.3d 1291, 1295-96 (Fed. Cir. 2012) (limiting the structure to the specific, disclosed converter and rejecting the argument that it was "any generic" converter, because the specification linked only the disclosed converter to the claimed function).

III. U.S. Patent No. 6,586,890

The parties agree that the five '890 terms in dispute are means-plus-function terms. **D.I. 175, App'x B** at 19-22. WAC disputes Philips Lighting's proposed function for the terms "means for sensing" and "means for modulating," but agrees with Philips Lighting that the

functions for remaining three terms are the recited functions. *See* ***id.*** The parties dispute the corresponding structure for all five terms. *See* ***id.*** In the IPR, the Board decided that no construction was necessary for any term except "means for supplying." **D.I. 118, Ex. 5** at 6-8; **D.I. 174, Ex. 4** at 7-10.

6. "means for sensing . . ." – Philips Lighting's proposed construction should be adopted. **D.I. 35** at 25-26; **D.I. 48** at 13; **D.I. 60, App'x B** at 13; **D.I. 101, Ex. A** at 204-13, **Ex. B** at 6, 7, 86-88, 91-94, 96, 190-99. WAC indicated at the hearing that Philips Lighting's proposed function was "[n]o longer disputed" (**D.I. 89, Ex. A** at 10, 113; **D.I. 175, App'x B** at 19 n.3), and also agreed with Philips Lighting's function in the IPR (**D.I. 85, Ex. 5** at 5) where the Board applies the same statutory standard for construing means-plus-function terms as in district court (*see* ***supra*** **Part I.2**). WAC argues here that "means for sensing" is indefinite because a structure cannot be determined, but in the IPR, WAC identified structure, i.e., "resistor(s) and operational amplifier (*e.g.*, differential amplifier) or other circuitry for normalizing or scaling current through the LEDs." **D.I. 85, Ex. 5** at 5. As support for "resistor(s)" performing the claimed function, WAC cites the same portion of the '890 specification (col. 3, lines 33-35) that Philips Lighting cited as support for including the resistors (R1A1, R1A2, and/or R1A3 in Fig. 2A or R1B1, R1B2, and/or R1B3 in Figure 2C) in Philips Lighting's proposed construction. WAC left out of its IPR construction the "current sensor 60" in Philips Lighting's proposal, but WAC's expert confirmed that a "current sensor" is typically a resistor. **D.I. 101, Ex. A** at 207-10 (citing **D.I. 36, Ex. 12** at 47:7-48:20). WAC's also errs in its IPR proposal by including the "operational amplifier . . . or other circuitry" because—as the construction concedes on its face—this structure performs a different function (normalizing and scaling) from the one recited.

7. "means for generating . . ." – Philips Lighting's proposed construction should be adopted. **D.I. 35** at 26-27; **D.I. 48** at 14; **D.I. 60, App'x B** at 13; **D.I. 101, Ex. A** at 214-21, **Ex. B** at 6, 7, 86-88, 91-94, 96, 200-05. WAC argues here that "means for generating" is indefinite because a structure cannot be determined, but WAC and its expert identified "an internal reference" as the corresponding structure in the IPR (same statutory standard, *see* ***supra*** **Part I.2**). **D.I. 85, Ex. 5** at 5-6. As support for "an internal reference" performing the recited function in the IPR, WAC cited the same "internal reference of the PWM control IC" language from the '890 specification (col. 3, lines 25-27) that Philips Lighting cites as support for its proposed corresponding structure. ***Id.*** at 6.

8. "means for comparing . . ." – Philips Lighting's proposed construction should be adopted. **D.I. 35** at 27-28; **D.I. 48** at 14-15; **D.I. 60, App'x B** at 13-14; **D.I. 101, Ex. A** at 222-31, **Ex. B** at 6, 7, 64-68, 73-76, 78-80, 206-12. In the IPR (same statutory standard, *see* ***supra*** **Part I.2**), WAC and its expert identified different corresponding structure, i.e., "comparator or operational amplifier." **D.I. 85, Ex. 5** at 6. WAC's proposed structure in the IPR resembles Philips Lighting's proposed structure here, which includes the comparator ("comparator 58") and the operational amplifiers ("internal op-amp in PWM control IC 118 or 134") disclosed in the '890 specification.

9. "means for modulating . . ." – Philips Lighting's proposed construction should be adopted. **D.I. 35** at 28-29; **D.I. 48** at 15-16; **D.I. 60, App'x B** at 14-15; **D.I. 101, Ex. A** at 232-42, **Ex. B** at 8-17, 64-68, 71, 73, 74, 81-83, 213-15. WAC indicated at the hearing that Philips Lighting's proposed function was "[n]o longer disputed" (**D.I. 89, Ex. A** at 12, 135; **D.I. 175, App'x B** at 21 n.4), and also agreed with Philips Lighting's function in the IPR (**D.I. 85, Ex. 5** at 7) where the Board applies the same statutory standard for construing means-

plus-function terms as in district court (*see* ***supra*** **Part I.2**). In the IPR, WAC and its expert identified different corresponding structure than in district court, i.e., "pulse width modulation control circuit." **D.I. 85, Ex. 5** at 7. WAC's proposed structure in the IPR resembles Philips Lighting's proposed structure here, which includes the pulse width modulation control circuits ("pulse width modulation (PWM) control IC 56; PWM control IC 118; or PWM control IC 134") disclosed in the '890 specification.

10. "means for supplying . . ." – Philips Lighting's proposed construction should be adopted. **D.I. 35** at 29-30; **D.I. 48** at 16-17; **D.I. 60, App'x B** at 15; **D.I. 101, Ex. A** at 243-49, **Ex. B** at 18-25, 50, 51, 56, 64-68, 73, 74, 216-19; **D.I. 117, Ex. 5** at 6-9. In the IPR (same statutory standard, *see* ***supra*** **Part I.2**), WAC and its expert identified different corresponding structure, i.e., "power supply with at least one transistor or switch for receiving a drive signal." **D.I. 85, Ex. 5** at 8. Consistent with Philips Lighting's position, the Board found that "[t]he structures associated with [the recited] function, as described in the specification are in an enumerated list of DC/DC converters including 'a buck-boost power supply or . . . a boost, buck, and flyback converter.'" **D.I. 118, Ex. 5** at 7. The Board also expressly acknowledged the construction that WAC proposes here, but did not adopt WAC's construction, finding "it more reasonable to construe the claim term consistent with the Specification's disclosure of structures and the claim language." ***Id.*** at 8. The Board construed the corresponding structure as "a buckboost, boost, buck, or flyback power supply and its equivalent power supplies that regulate current (as opposed to regulating voltage)." ***Id.***; **D.I. 175, Ex. 4** at 7-10. Philips Lighting agrees with the Board that the claims require the power supply to "regulate current (as opposed to regulating voltage)." **D.I. 118, Ex. 5** at 8; **D.I. 175, Ex. 4** at 10.

IV. U.S. Patent No. 6,788,011

11. "second LED" – No construction is necessary, or Philips Lighting's proposed construction should be adopted. **D.I. 35** at 30-32; **D.I. 48** at 17; **D.I. 60, App'x B** at 16; **D.I. 101, Ex. A** at 257-60, **Ex. B** at 26-33, 93, 94, 97, 221-26. WAC takes a simple term ("second LED") and adds ambiguity by requiring that the second LED be "separate and distinct" from the first LED. The phrase "separate and distinct" may be misinterpreted as narrowing the scope of the claims to exclude embodiments where the first and second LEDs are physically or electrically connected, which as explained at the citations above would be inconsistent with the '011 patent. WAC gave no reason or explanation for its proposed construction in its opening brief (**D.I. 40** at 30), and in its responsive brief, WAC stated that its proposal "does not read out LEDs that may be connected to one another" (**D.I. 52** at 16). But if that is the case, there is no apparent reason to construe the term at this time, and WAC does not identify one.

V. U.S. Patent Nos. 7,038,399 and 7,352,138

12. "signals other than a standard A.C. line voltage" – No construction is necessary, or Philips Lighting's proposed construction should be adopted. **D.I. 35** at 39-40; **D.I. 48** at 20; **D.I. 60, App'x B** at 19; **D.I. 101, Ex. A** at 286-99, **Ex. B** at 34-47, 86, 87, 89, 90, 227-34; **D.I. 117, Ex. 6** at 9-13, **Ex. 7** at 9-13; **D.I. 175, Ex. 11** at 7-10, **Ex. 12** at 7-10. In the IPR, the Board construed the term consistent with Philips Lighting's construction. **D.I. 174, Ex. 5** at 8-14, **Ex. 6** at 8-14. The Board also agreed with Philips Lighting that (1) "signals" requires two or more signals, and (2) the "signals" are "A.C." signals because the claimed power source that provides the signals is an "alternating current (A.C.) power source." ***Id.***; **D.I. 1, Ex. G** at 25:45, **Ex. H** at 24:66. WAC's new construction concedes the two more signals requirement ("more than one"). Regarding the Board's finding on "A.C." signals, WAC acknowledges the claimed "A.C. power source," but while A.C. power sources inherently output A.C. signals, WAC's

proposed construction leaves it ambiguous by referring to "more than one signal" instead of two or more A.C. signals. As the Board found, WAC errs to the extent its construction encompasses D.C. signals. **D.I. 174, Ex. 5** at 14, **Ex. 6** at 14.

The disputed term is "signals other than a standard A.C. line voltage" (**D.I. 60, App'x B** at 19), but WAC now seeks to construe "alternating current (A.C.) power source that provides signals other than a standard A.C. line voltage" (**D.I. 175, App'x B** at 25, 32). WAC urges adding a new limitation to the A.C. power source—which was not argued here or in the IPR—to require that the A.C. power source "*does not provide* a standard A.C. line voltage." ***Id.*** (emphasis added). WAC selectively quotes the "negative limitation" language from the Board's decision, without the context. The Board referred to the "negative limitation" with respect to "signals *other than a standard A.C. line voltage*," to conclude that the claims require that the A.C. power source provides two or more *non-standard* A.C. signals. **D.I. 174, Ex. 6** at 8-12. The Board never suggested (and neither party argued) that the claims require that the A.C. power source also "*not provide* a standard A.C. line voltage," as WAC now argues.

First, WAC's construction is irrelevant because the claims are directed to *a controller* in the illumination apparatus that is configured to *receive* and *provide power based on* non-standard A.C. signals from an alternating current (A.C.) power source. **D.I. 1, Ex. G** at 24:62-25:3, **Ex. H** at 24:64-25:3. The claimed apparatus does not include the A.C. power source itself, and thus, adding a requirement that the A.C. power source does not provide some other signal as WAC proposes is a non-limitation with respect to the claimed apparatus. Second, such a construction represents legal error because it rewrites the claims to include a new element that does not exist and because it contradicts the '399/'138 specification, which allows for (but does not require) the

alternating current (A.C.) power source to provide a standard A.C. line voltage in addition to the claimed two or more non-standard A.C. signals. **D.I. 1, Ex. G** at Fig. 1; **Ex. H** at Fig. 1.

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Respectfully submitted,

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CERTIFICATE OF SERVICE

I certify that this document filed through the ECF system will be sent electronically to the registered participants as identified on the Notice of Electronic Filing (NEF), and paper copies will be sent to those indicated as nonregistered participants on March 27, 2017.

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